

**AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. APP. NO. 09/140,752**

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

Claims 1-22 (canceled).

Claim 23 (currently amended): In a system for receiving and adaptively processing a video signal encoded in one of a plurality of different formats suitable for ~~satellite~~, terrestrial or cable transmission modes, apparatus comprising:

an adaptive decoder for providing a decoded output from an input signal encoded in different signal formats for different transmission modes;

an adaptive deinterleaver for deinterleaving said decoded output in accordance with a deinterleaving function selected from a plurality of deinterleaving functions wherein

said adaptive deinterleaver is configured with said selected deinterleaving function; and

an output signal processor for processing deinterleaved output data.

Claim 24 (currently amended): In a system for receiving and adaptively processing a video signal encoded in one of a plurality of different signal formats suitable for ~~satellite~~, terrestrial or cable transmission modes, apparatus comprising:

an adaptive decoder for providing a decoded output from an input signal encoded at different times in accordance with different ones of said plurality of different signal formats;

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

an adaptive deinterleaver for deinterleaving said decoded output in accordance with a deinterleaving function selected from a plurality of deinterleaving functions, wherein said adaptive deinterleaver is configured with said selected deinterleaving function; and

an output signal processor for processing deinterleaved output data.

Claim 25 (previously presented): Apparatus according to one of claims 23 and 24, wherein said adaptive decoder is configured with a selected decoding function to decode said input signal.

Claim 26 (previously presented): Apparatus according to one of claims 23 and 24, wherein said adaptive decoder is an adaptive trellis decoder configured with a selected decoding function to decode said input signal.

Claim 27 (previously presented): Apparatus according to one of claims 23 and 24, wherein said output processor includes a means for reordering said deinterleaved output data.

Claim 28 (previously presented): Apparatus according to one of claims 23 and 24, wherein said output processor includes a descrambler for descrambling said output data.

Claim 29 (previously presented): Apparatus according to one of claims 23 and 24, wherein said output signal processor includes an adaptive derandomizer to reorder said deinterleaved output data where necessary for restoring it to an original format thereof before any randomization performed for transmission purposes.

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

Claim 30 (previously presented): Apparatus according to one of claims 23 and 24, further including a demodulator for demodulating a modulated video input signal to provide said input signal encoded in different signal formats.

Claim 31 (previously presented): Apparatus according to one of claims 23 and 24, further including a demodulator for demodulating a modulated video input signal to provide each said input signal encoded in accordance with one of said plurality of different signal formats.

Claim 32. (previously presented): Apparatus according to one of claims 23 and 24, further including a differential decoder for providing a differentially decoded output as said decoded output when said encoded video signal exhibits a predetermined format.

Claim 33 (previously presented): Apparatus according to claim 30, wherein said demodulator demodulates an input signal having a carrier with plural-phase amplitude.

Claim 34 (previously presented): Apparatus according to claim 31, wherein said demodulator demodulates an input signal having a carrier with plural-phase amplitude.

Claim 35 (previously presented): Apparatus according to claim 30, wherein said demodulator demodulates a QAM modulated video input signal.

Claim 36 (previously presented): Apparatus according to claim 31, wherein said demodulator demodulates a QAM modulated video input signal.

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

Claim 37 (previously presented): Apparatus according to one of claims 23 and 24, further including a means for processing the data for being interleaved as a function of said different signal formats and different symbol constellations of said input signal.

Claim 38 (previously presented): Apparatus according to one of claims 23 and 24, wherein said adaptive decoder has circuitry connected therewith for selectively mapping data for being deinterleaved as a function of said different signal formats and different symbol constellations of said input signal.

Claim 39 (previously presented): Apparatus according to one of claims 23 and 24, further including a means for processing the data as a function of said different signal formats and different symbol constellations of said input signal to be deinterleaved.

Claim 40 (previously presented): Apparatus according to claim 37, wherein one of said different signal formats is a vestigial-sideband amplitude-modulated input signal with a one-dimensional symbol constellation, and wherein another of said different signal formats is a quadrature-amplitude-modulated (QAM) input signal with a two-dimensional symbol constellation.

Claim 41 (previously presented): Apparatus according to claim 38, wherein one of said different signal formats is a vestigial-sideband amplitude-modulated input signal with a one-dimensional symbol constellation, and wherein another of said different signal formats is a quadrature-amplitude-modulated (QAM) input signal with a two-dimensional symbol constellation.

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

Claim 42 (previously presented): Apparatus according to claim 39 wherein one of said different signal formats is a vestigial-sideband amplitude-modulated input signal with a one-dimensional symbol constellation, and wherein another of said different signal formats is a quadrature-amplitude-modulated (QAM) input signal with a two-dimensional symbol constellation.

Claim 43 (previously presented): Apparatus according to one of claims 23 and 24, wherein said adaptive decoder and adaptive deinterleaver are automatically configured to be compatible with the format of said encoded video signal.

Claim 44 (previously presented): Apparatus according to one of claims 23 and 24, wherein said adaptive decoder and adaptive deinterleaver are automatically configured to be compatible with the format of said input signal in response to a control signal generated by detection apparatus for determining the format of said input signal.

Claim 45 (previously presented): Apparatus according to one of claims 23 and 24, further including an adaptive error processor for correcting errors in said deinterleaved output data, said error processor adapting between different signal formats by changing at least one of: (a) error function type, (b) error correction code length, and (c) data packet length.

Claim 46 (previously presented): Apparatus according to claim 44, further including an adaptive error processor for correcting errors in said deinterleaved output data, said error processor responding to said control signal to adapt between different ones of said plurality of

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

signal formats by changing at least one of: (a) error function type, (b) error correction code length, and (c) data packet length.

Claim 47 (previously presented): Apparatus according to claim 45, wherein said adaptive error processor adapts between different signal formats by adapting to parity data in said deinterleaved output data.

Claim 48 (previously presented): Apparatus according to one of claims 23 and 24, further including: an adaptive error processor for correcting errors in said deinterleaved output data, said error processor adapting between ones of said plurality of different signal formats by changing at least one of: (a) error function type, (b) error correction code length, and (c) data packet length.

Claim 49 (previously presented): Apparatus according to claim, 45 wherein said adaptive error processor is a Reed-Solomon decoder.

Claim 50 (previously presented): Apparatus according to claim, 46 wherein said adaptive error processor is a Reed-Solomon decoder.

Claim 51 (previously presented): Apparatus according to claim 47, wherein said adaptive error processor is a Reed-Solomon decoder.

Claim 52 (previously presented): Apparatus according to claim 48, wherein said adaptive error processor is a Reed-Solomon decoder.

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

Claim 53 (currently amended): In a system for receiving and adaptively processing a video signal encoded in one of a plurality of different formats suitable for ~~satellite~~, terrestrial or cable transmission modes, apparatus comprising:

an adaptive decoder for providing a decoded output from an input signal encoded in different signal formats for different transmission modes;

an adaptive error decoder for detecting and correcting errors in said decoded output, said error decoder adapting between different signal formats by changing at least one of: (a) error function type, (b) error correction code length, and (c) data packet length; and

an output signal processor for processing said error corrected data.

Claim 54 (currently amended): In a system for receiving and adaptively processing a video signal encoded in one of a plurality of different formats suitable for ~~satellite~~, terrestrial or cable transmission modes, apparatus comprising:

an adaptive decoder for providing a decoded output from an input signal encoded at different times in accordance with different ones of said plurality of different signal formats;

an adaptive error decoder for detecting and correcting errors in said decoded output, said error decoder adapting between ones of said plurality of different signal formats by changing at least one of:

(a) error function type,

(b) error correction code length, and

(c) data packet length; and

an output signal processor for processing said error corrected data.

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

Claim 55 (previously presented): Apparatus according to one of claims 53 and 54, further including a differential decoder for providing a differentially decoded output as said decoded output when said encoded video signal exhibits a predetermined format.

Claim 56. (previously presented): Apparatus according to one of claims 53 and 54, wherein said adaptive error decoder is a Reed-Solomon decoder.

Claim 57 (currently amended): In a system for receiving and adaptively processing a video signal encoded in one of a plurality of different formats suitable for ~~satellite~~, terrestrial or cable transmission, apparatus comprising:

an adaptive deinterleaver for deinterleaving said encoded video signal encoded in one of a plurality of deinterleaving functions; and

an adaptive error decoder for detecting and correcting errors in said deinterleaved output, said error decoder adapting between different signal formats by changing at least one of: (a) error function type, (b) error correction code length, and (c) data packet length; and

an output signal processor for processing said error corrected data.

Claim 58 (currently amended): In a system for receiving and adaptively processing a video signal encoded in one of a plurality of different signal formats suitable for ~~satellite~~, terrestrial or cable transmission, apparatus comprising:

an adaptive deinterleaver for deinterleaving said decoded video signal in accordance with a deinterleaving function selected from a plurality of deinterleaving functions; and



**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

an adaptive error decoder for detecting and correcting errors in said deinterleaved output, said error decoder adapting between ones of said plurality of different signal formats by changing at least one of: (a) error function type. (b) error correction code length, and (c) data packet length; and

an output signal processor for processing said error corrected data.

Claim 59 (previously presented): Apparatus according to one of claims 57 and 58, wherein said adaptive error decoder function is a Reed-Solomon function.

Claim 60 (previously presented): Apparatus according to one of claims 57 and 58, wherein said adaptive error decoder is a Reed-Solomon decoder.

Claim 61 (previously presented): Apparatus according to one of claims 57 and 58, wherein said adaptive deinterleaver is configured with said selected deinterleaving function.

Claim 62 (currently amended): A method for adaptively processing a video signal encoded in one of a plurality of different formats suitable for ~~satellite~~, terrestrial or cable transmission modes, comprising the steps of:

adaptively decoding an input signal to provide a decoded output, said input signal being encoded in different signal formats for different transmission modes;

selecting a deinterleaving function from a plurality of deinterleaving functions;  
configuring an adaptive deinterleaver with said selected deinterleaving function;

adaptively deinterleaving said decoded output using said selected deinterleaving function;  
and

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

processing said deinterleaved data.

Claim 63 (currently amended): A method for adaptively processing a video signal encoded in one of a plurality of different formats suitable for ~~satellite~~, terrestrial or cable transmission modes, comprising the steps of:

adaptively decoding an input signal, as encoded at different times in accordance with different ones of said plurality of different signal formats, to provide a decoded output signal;

selecting a deinterleaving function from a plurality of deinterleaving functions; configuring an adaptive deinterleaver with said selected deinterleaving function;

adaptively deinterleaving said decoded output signal using said adaptive deinterleaver configured with said selected deinterleaving function; and

processing said deinterleaved data.

Claim 64 (currently amended) A method of adaptively processing a video signal encoded in one of a plurality of different formats suitable for ~~satellite~~, terrestrial or cable transmission, comprising the steps of:

adaptively decoding an input signal encoded in different signal formats for different transmission modes to provide a decoded output;

adaptively detecting errors in said decoded output;

adaptively correcting said detected errors in said decoded output by changing at least one of: (a) error function type, (b) error correction code length, and (c) data packet length; and

processing said error corrected data.

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

Claim 65 (currently amended): A method of adaptively processing a video signal encoded in one of a plurality of different formats suitable for ~~satellite~~, terrestrial or cable transmission, comprising the steps of:

adaptively decoding an input signal, as encoded at different times in accordance with different ones of said plurality of different signal formats, to provide a decoded output signal;

adaptively detecting errors in said decoded output signal;

adaptively correcting said detected errors in said decoded output signal by changing at least one of: (a) error function type, (b) error correction code length, and (c) data packet length; and

processing said error corrected data.

Claim 66 (currently amended): A method of adaptively processing a video signal encoded in one of a plurality of different formats suitable for ~~satellite~~, terrestrial or cable transmission, comprising the steps of:

adaptively decoding an input signal encoded in different signal formats for different transmission modes, to produce a decoded output;

selecting a deinterleaving function from a plurality of deinterleaving functions;

adaptively deinterleaving said decoded output using said selected deinterleaving function;

detecting errors in deinterleaved output of different signal formats;

adaptively correcting an error in deinterleaved output of different signal formats by changing at least one of: (a) error function type, (b) error correction code length, and (c) data packet length; and

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

processing said error corrected data.

Claim 67 (currently amended): A method for adaptively processing a video signal encoded in one of a plurality of different formats suitable for ~~satellite~~, terrestrial or cable transmission, comprising the steps of:

adaptively decoding an input signal, as encoded at different times in accordance with different ones of said plurality of different signal formats, to provide a decoded output signal;

selecting a deinterleaving function from a plurality of deinterleaving functions;

adaptively deinterleaving said decoded output signal using said selected deinterleaving function;

detecting errors in deinterleaved output signal of different signal formats;

adaptively correcting an error in deinterleaved output signal of different signal formats by changing at least one of: (a) error function type. (b) error correction code length. and (c) data packet length; and

processing said error corrected data.

Claim 68 (previously presented): A method according to one of claims 66 and 67, further including the step of configuring an adaptive deinterleaver with said selected deinterleaving function.

Claim 69 (withdrawn - currently amended) In a system for receiving and adaptively processing a carrier modulated with video information in one of a plurality of different modulation formats suitable for ~~satellite~~, terrestrial or cable transmission, an adaptive demodulator network comprising:

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

a timing recovery network for recovering timing data from said modulated carrier;

an adaptive carrier recovery network responsive to said timing data for recovering said video information from said carrier in said different modulation formats; and

a selectable decision network, included in said adaptive carrier recovery network, for applying a set of decision thresholds to data provided by said carrier recovery network to recover said video information, said set of decision thresholds being selected from a plurality of sets of decision thresholds suitable for different decision formats.

Claim 70 (withdrawn - currently amended) In a system for receiving and adaptively processing a carrier modulated with video information in one of a plurality of different modulation formats suitable for ~~satellite~~, terrestrial or cable transmission, an adaptive demodulator network comprising:

a timing recovery network for recovering timing data from said modulated carrier;

an adaptive carrier recovery network responsive to said timing data for recovering said video information from said carrier in said different modulation formats; and

a selectable decision network, included in said adaptive carrier recovery network, for applying a set of decision thresholds to data provided by said carrier recovery network to recover said video information, said set of decision thresholds being selected from a plurality of sets of decision thresholds suitable for said different modulation formats.

Claim 71 (withdrawn): A system according to one of claims 69 and 70 further including a selectable differential decoder for differentially decoding a signal produced by said carrier recovery network.

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

Claim 72 (withdrawn) A system according to one of claims 69 and 70 further including a differential decoder for differentially decoding a signal produced by said carrier recovery network.

Claim 73 (withdrawn) A system according to one of claims 69 and 70 wherein said selectable decision network applies decision thresholds for a VSB one-dimensional symbol constellation and for a QAM two-dimensional symbol constellation.

Claim 74 (withdrawn) A system according to one of claims 69 and 70, wherein said selectable decision network applies decision thresholds appropriate for at least two of PAM, QPSK, VSB and QAM constellations.

Claim 75 (withdrawn) A system according to one of claims 69 and 70, wherein the modulation format of said video information uses a symbol constellation containing a plurality of symbol points.

Claim 76 (withdrawn) A system according to claim 75, wherein one of said modulation formats is a vestigial-sideband amplitude-modulation format with a one-dimensional symbol constellation having eight symbol points.

Claim 77 (withdrawn) A system according to claim 75, wherein one of said modulation formats is a quadrature-amplitude-modulation format with a two-dimensional symbol constellation having at least sixteen symbol points.

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

Claim 78 (withdrawn) A system according to one of claims 69 and 70, wherein said carrier recovery network further includes a selectable equalizer network for compensating for errors associated with a transmission channel, wherein the configuration of said equalizer filter network is selected in accordance with the modulation format of said modulated carrier.

Claim 79 (withdrawn) A system according to claim 78, wherein said selectable equalizer network includes a feed forward equalizer filter and a decision feedback equalizer.

Claim 80 (withdrawn) A system according to one of claims 69 and 70, wherein said adaptive carrier recovery network is automatically configured to be compatible with the modulation format of said carrier modulated with video information.

Claim 81 (withdrawn) A system according to one of claims 69 and 70, wherein said adaptive carrier recovery network is automatically configured to be compatible with the modulation format of said carrier modulated with video information, in response to a control signal generated by detection apparatus for determining the modulation format of said carrier modulated with video information.

Claim 82 (withdrawn) In a receiver for adaptively processing an input signal containing data in one of a plurality of different input formats and wherein said data is encoded in one of a plurality of different coding formats, apparatus comprising:

an adaptive timing recovery network for recovering timing information from said input signal as a function of a received input signal format;

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

an adaptive data recovery network responsive to said timing information for recovering said data;

a selectable decision network, included in said data recovery network, for applying a set of decision thresholds to data provided by said data recovery network to recover said data, said set of decision thresholds being selected from a plurality of sets of decision thresholds suitable for different input signal formats; and

an adaptive decoder for selectively decoding said recovered data as a function of a received data coding format to produce recovered and decoded output data.

Claim 83 (withdrawn) In a receiver for adaptively processing an input signal containing data in one of a plurality of different input formats and wherein said data is encoded in one of a plurality of different coding formats, apparatus comprising:

an adaptive timing recovery network for recovering timing information from said input signal as a function of a received input signal format;

an adaptive carrier recovery network responsive to said timing information for recovering said data;

a selectable decision network, included in said carrier recovery network, for applying a set of decision thresholds to data provided by said carrier recovery network to recover said data, said set of decision thresholds being selected from a plurality of sets of decision thresholds suitable for different input signal formats; and

an adaptive decoder for selectively decoding said recovered data as a function of a received data coding format to produce recovered and decoded output data.



**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

Claim 84 (withdrawn) In a receiver for adaptively processing an input signal containing data in one of a plurality of different input formats and wherein said data is encoded in one of a plurality of different coding formats, apparatus comprising:

an adaptive timing recovery network for recovering timing information from said input signal as a function of a received input signal format;

an adaptive data recovery network responsive to said timing information for recovering said data;

an adaptive decoder for selectively decoding the data recovered by said adaptive data recovery network, as a function of a received data coding format, to produce recovered and decoded output data;

a selectable decision network, included in one of said adaptive decoder and said data recovery network, for applying a set of decision thresholds to data provided by said data recovery network to recover said data, said set of decision thresholds being selected from a plurality of sets of decision thresholds suitable for different input signal formats.

Claim 85 (withdrawn) Apparatus according to one of claims 82-84, wherein said receiver for adaptively processing an input signal is automatically configured to be compatible with the format of said input signal.

Claim 86 (withdrawn) Apparatus according to one of claims 82-84, wherein said receiver for adaptively processing an input signal is automatically configured to be compatible with the format of said input signal in response to a control signal generated by detection

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

apparatus for determining the modulation format used for transmitting said input signal to said receiver.

Claim 87 (withdrawn) Apparatus according to one of claims 82-84,  
said data recovery network is a carrier recovery network for recovering said modulation data.

Claim 88 (withdrawn - currently amended) In a receiver for adaptively processing a carrier modulated with data in one of a plurality of different modulation formats suitable for ~~satellite~~, terrestrial or cable transmission and wherein said modulating data is encoded in one of a plurality of different formats suitable for ~~satellite~~, terrestrial or cable transmission, apparatus comprising:

an adaptive timing recovery network for recovering timing data from said modulated carrier as a function of a received carrier modulation format;

an adaptive carrier recovery network responsive to said timing data for recovering said modulating data from said modulated carrier;

a selectable decision network, included in said carrier recovery network, for applying a set of decision thresholds to data provided by said carrier recovery network to recover said modulating data, said set of decision thresholds being selected from a plurality of sets of decision thresholds suitable for said different modulation formats; and

an adaptive decoder for selectively decoding said recovered modulating data as a function of a received data encoding format to produce demodulated and decoded output data.

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

Claim 89 (withdrawn) Apparatus according to claim 88, wherein said receiver for adaptively processing a carrier modulated with data is automatically configured to be compatible with the format of said carrier modulated with data.

Claim 90 (withdrawn) Apparatus according to claim 88, wherein said receiver for adaptively processing a carrier modulated with data is automatically configured to be compatible with said one of a plurality of modulation formats in response to a control signal generated by detection apparatus for determining the modulation format used for transmitting said carrier modulated with data to said receiver.

Claim 91 (withdrawn - currently amended) In a receiver for adaptively processing an input signal containing a carrier modulated with video data in one of a plurality of different modulation formats suitable for ~~satellite~~, terrestrial or cable transmission and wherein said modulating video data is encoded in one of a plurality of different formats suitable for ~~satellite~~, terrestrial or cable transmission, apparatus comprising:

an adaptive timing recovery network for recovering timing data from said modulated carrier as a function of a received carrier modulation format;

an adaptive carrier recovery network responsive to said timing data for recovering said modulating data from said modulated carrier;

a selectable decision network, included in said carrier recovery network, for applying a set of decision thresholds to data provided by said carrier recovery network to recover said modulating data, said set of decision thresholds being selected from a plurality of sets of decision thresholds suitable for different modulation formats;

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

an adaptive decoder for decoding said recovered modulating data as a function of a received data coding format to produce demodulated and decoded output data;

an adaptive deinterleaver for deinterleaving said demodulated and decoded output and providing a deinterleaved output in accordance with a deinterleaving function selected from a plurality of deinterleaving functions;

an adaptive error processor for error correcting said deinterleaved output to provide an error corrected output; and

a derandomizer for restoring said error corrected data to an original format thereof before randomization performed for transmission purposes.

Claim 92 (withdrawn) Apparatus according to claim 91, wherein said receiver for adaptively processing an input signal is automatically configured to be compatible with the format of said input signal.

Claim 93 (withdrawn) Apparatus according to claim 91, wherein said receiver for adaptively processing an input signal is automatically configured to be compatible with the format of said input signal in response to a control signal generated by detection apparatus for determining the modulation format used for transmitting said input signal to said receiver.

Claim 94 (withdrawn) A receiver for adaptively processing a carrier modulated with video data in one of a plurality of different modulation formats and wherein said modulating video data is encoded in one of a plurality of different formats, comprising:

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

an adaptive timing recovery network for recovering timing data from said modulated carrier as a function of a received carrier modulation format;

an adaptive carrier recovery network responsive to said timing data for recovering modulating data from said modulated carrier;

a selectable decision network, included in said carrier recovery network, for applying a set of decision thresholds to data provided by said carrier recovery network to recover said modulating data, said set of decision thresholds being selected from a plurality of sets of decision thresholds suitable for said different modulation formats;

an adaptive decoder for decoding said recovered modulating data and providing a decoded output as a function of a received data encoding format;

an adaptive deinterleaver for deinterleaving said decoded output and providing an output in accordance with a deinterleaving function selected from a plurality of deinterleaving functions;

an adaptive error processor for error correcting said deinterleaved output to provide an error corrected output; and

a derandomizer for derandomizing said error corrected output.

Claim 95 (withdrawn) Apparatus according to claim 94, wherein said receiver for adaptively processing a carrier modulated with video data is automatically configured to be compatible with the format of said carrier modulated with video data.

Claim 96 (withdrawn) Apparatus according to claim 94, wherein said receiver for adaptively processing an input signal is automatically configured to be compatible with the

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

format of said carrier modulated with video data in response to a control signal generated by detection apparatus for determining the modulation format used for transmitting said carrier modulated with video data to said receiver.

Claim 97 (withdrawn - currently amended) In a system for receiving and adaptively processing a carrier modulated with data in one of a plurality of different modulation formats suitable for ~~satellite~~, terrestrial or cable transmission, apparatus comprising:

a timing recovery network for recovering timing data from said modulated carrier as supplied via a currently received transmission channel;

an adaptive data recovery network responsive to said timing data for recovering said modulating data from said modulated carrier in one of said plurality of modulation formats; and

a selectable equalizer network included within said adaptive data recovery network for compensating for errors associated with said currently received transmission channel, wherein the configuration of said equalizer network is selected in accordance with the modulation format of said modulated carrier as supplied via said currently received transmission channel.

Claim 98 (withdrawn) Apparatus as set forth in claim 97, wherein said equalizer network is automatically configured to be compatible with the modulation format of said modulated carrier as supplied via said currently received transmission channel, the automatic configuring being done in response to a control signal generated by

detection apparatus for determining the modulation format used for transmitting said modulating data to said receiver.

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

Claim 99 (withdrawn) A system according to claim 97, wherein said selectable equalizer network includes a feed forward equalizer filter and a decision feedback equalizer.

Claim 100 (withdrawn) In a system for receiving a modulated signal from multiple types of transmission channels, said signal being representative of compressed digital data coded in one of a plurality of coding formats and exhibiting one of a plurality of modulation formats, a method comprising the steps of:

selecting a modulation format for demodulation from among modulation formats including a QAM format and including another modulation format;

demodulating said modulated signal according to said selected modulation format to produce a demodulated signal;

selecting a coding format for decoding from among said plurality of coding formats; and

decoding said demodulated signal according to said selected coding format to produce a demodulated and decoded signal.

Claim 101 (withdrawn) A method according to claim 100, wherein said modulation formats also include PAM.

Claim 102 (withdrawn) A method according to claim 101, wherein said PAM is received as a vestigial-sideband amplitude-modulation.

Claim 103 (withdrawn) A method according to claim 100, wherein said plurality of coding formats includes punctured coded and trellis coded formats.

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

Claim 104 (withdrawn) A method according to claim 100, wherein said plurality of coding formats includes trellis coded formats.

Claim 105 (withdrawn) A method according to claim 104, wherein at least one of said trellis coded formats is a punctured coded format.

Claim 106 (withdrawn - currently amended) A method according to claim 100, wherein said step of selecting a modulation format includes a step of selecting between multiple types of transmission channels including at least two channels from among ~~satellite~~, cable and terrestrial channels.

Claim 107 (withdrawn) A method according to claim 100, wherein said QAM format is QPSK.

Claim 108 (withdrawn - currently amended) In a system for receiving a modulated signal from multiple types of transmission channels, said signal being representative of compressed digital data coded in one of a plurality of coding formats and exhibiting one of a plurality of modulation formats, said multiple types of transmission channels including at least two channels from among ~~satellite~~, cable and terrestrial channels, signal processing apparatus comprising:

a demodulator for selectively demodulating said modulated signal from among modulation formats including PAM and including QAM to produce a demodulated signal; and



**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

a decoder for selectively decoding said demodulated signal from among coding formats including punctured coded and trellis coded formats to produce a demodulated and decoded signal.

Claim 109 (withdrawn - currently amended) In a system for receiving a modulated signal from multiple types of transmission channels, said signal being representative of compressed digital data coded in one of a plurality of coding formats and exhibiting one of a plurality of modulation formats, said multiple types of transmission channels including at least two channels from among ~~satellite~~, cable and terrestrial channels, signal processing apparatus comprising:

a demodulator for selectively demodulating said modulated signal from among modulation formats including PAM and including QAM to produce a demodulated signal; and

a decoder for selectively decoding said demodulated signal from among coding formats including trellis coded formats to produce a demodulated and decoded signal.

Claim 110 (withdrawn) Apparatus according to claim 109, wherein at least one of said trellis coded formats is a punctured coded format.

Claim 111 (withdrawn) Apparatus according to one of claims 108 and 109, wherein said data is video information.

Claim 112 (withdrawn) Apparatus according to claim 111, wherein said video information is television picture information.

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

Claim 113 (withdrawn) Apparatus according to one of claims 108 and 109, wherein said data is television information, including video information and sound information.

Claim 114 (withdrawn) In a system for receiving a modulated signal from multiple types of transmission channels, said signal being representative of compressed digital data coded in one of a plurality of coding formats and exhibiting one of a plurality of modulation formats, a method comprising the steps of:

selecting a modulation format for demodulation from among said plurality of modulation formats;

demodulating said modulated signal according to said selected modulation format to produce a demodulated signal;

selecting a coding format for decoding from among coding formats including punctured coded and trellis coded formats; and

decoding said demodulated signal according to said selected coding format to produce a demodulated and decoded signal.

Claim 115 (withdrawn) In a system for receiving a modulated signal from multiple types of transmission channels, said signal being representative of compressed digital data coded in one of a plurality of coding formats and exhibiting one of a plurality of modulation formats, a method comprising the steps of:

selecting a modulation format for demodulation from among said plurality of modulation formats;

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

demodulating said modulated signal according to said selected modulation format to produce a demodulated signal;

selecting a coding format for decoding from among coding formats including trellis coded formats; and

decoding said demodulated signal according to said selected coding format to produce a demodulated and decoded signal.

Claim 116 (withdrawn) Apparatus according to claim 115, wherein at least one of said trellis coded formats is a punctured coded format.

Claim 117 (withdrawn) A method according to one of claims 114 and 115, wherein said plurality of modulation formats includes a QAM format.

Claim 118 (withdrawn) A method according to claim 117, wherein said QAM format is QPSK.

Claim 119 (withdrawn) A method according to claim 117, wherein said plurality of modulation formats includes PAM.

Claim 120 (withdrawn) A method according to claim 119, wherein said PAM is received as a vestigial-sideband amplitude-modulation.

Claim 121 (withdrawn - currently amended) A method according to one of claims 114 and 115, wherein said step of selecting a modulation format includes a step of selecting between

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. APP. NO. 09/140,752**

multiple types of transmission channels including at least two channels from among satellite, cable and terrestrial channels.